

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 5, 6, and 9 are presently active in this case, Claim 1 having been amended, Claim 9 having been added by the present amendment, and Claims 3, 4, 7, and 8 having been withdrawn from consideration as directed to a non-elected invention.

In the outstanding Office Action, Claims 1 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by Bonzon (USP 3,051,266) and Claims 2 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bonzon in view of Koppensteiner (USP 4,538,706).

In view of the outstanding grounds for rejection, Claim 1 has been amended to clarify the claimed invention and thereby more clearly patentably define over the cited prior art. To that end, amended Claim 1 states that the gripper metal has an inclined portion caused to incline with respect to the outer periphery of the sheave, and that the brake body comes into contact with the inclined portion and with the outer periphery of the sheave and is meshed between the outer periphery of the sheave and the inclined portion, so that rotation of the sheave is braked. These features are consistent with the Applicant's disclosure of Figures 1-2 and the related discussion in the specification. Also added is new Claim 9, which finds support in the sentence linking pages 5 and 6 of the specification. No new matter has been added.

The amendments accentuate the structure by which reliable auxiliary/emergency braking is achieved according to the present invention. In particular, paragraphs [0030] – [0032] of the specification state:

[0030] In such the emergency brake device 13 for an elevator, the brake roller 18 is displaced in the rotation direction of the drive sheave 7 to be meshed between the gripper metal 16 and the drive sheave 7, thereby braking the

rotation of the drive sheave 7. **Therefore, the torque of the drive sheave 7 can be converted to pressing force of the brake roller 18 with respect to the drive sheave 7. Accordingly, the emergency brake device 13 as a whole can be reduced in size and in installation space. As a result, the manufacturing cost can also be reduced. Further, the rotation of the drive sheave 7 can also be braked more reliably.**

[0031] Further, the brake roller 18 is rotatably mounted to the connecting body 19 such that a constant friction (frictional force) is generated. Therefore, the brake roller 18 can be smoothly meshed between the drive sheave 7 and the gripper metal 16.

[0032] Further, the connecting body position returning device 27 biases the connecting body 19 against the displacement of the brake roller 18 when the brake roller 18 is displaced in the rotation direction of the drive sheave 7. Therefore, the connecting body position returning device 27 can bias the connecting body 19 in a direction in which the meshing of the brake roller 18 between the drive sheave 7 and the gripper metal 16 is released, thereby returning the emergency brake device 13 to an operating state easily and more reliably. (Emphasis added.)

In short, the claimed emergency brake device includes the gripper having an inclined portion and further includes “the brake body ... capable of coming into and out of contact with an outer periphery of the sheave and capable of being displaced in a rotation direction of the sheave while maintaining a contact with the outer periphery of the sheave,” such that when actuated, the brake body is meshed between the outer portion of the gripper and the sheave, i.e., effectively wedged therebetween, so that **“the torque of the drive sheave 7 can be converted to pressing force of the brake roller 18 with respect to the drive sheave 7.”**¹ In other words, the full torque of the sheave is utilized in the emergency braking according to Applicant’s invention.

No such teachings are provided by Bonzon which discloses an auxiliary brake 8 actuated merely to press against a drive sheave 1 under a force exerted by the Bonzon actuator system. Note that the “stationary runaways” 22 asserted at page 3, paragraph 8 in the outstanding rejection as corresponding to the “gripper metal 16” of Applicant’s invention,

¹ Specification, paragraph [0030].

never comes into contact with the Bonzon auxiliary brake 8, and Bonzon completely fails to teach contacting meshing of a brake between a sheath and an inclined portion of a gripper. As a result, Bonzon can not take advantage of the full torque of the sheath is limited by the force applicable to the brake by its actuation system.

In view of the deficiencies above noted in Bonzon, which deficiencies are not remedied by Koppensteiner, it is respectfully submitted that the outstanding grounds for rejection have been overcome. Withdrawal thereof is therefore believed to be in order and is respectfully requested.

Consequently, in view of the present amendment and in light of the above comments, no further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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